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MOUNTED BATTLESPACE



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US ARMY BATTLE DYNAMIC CONCEPT

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Foreword

At the beginning of World War I, artillery and infantry shaped the land battlefield and aircraft were used primarily for reconnaissance. Since then, the military has seen not one, but two technological revolutions. The first significantly changed the face of warfare, and defined ground conflict in World War II with the widespread use of the internal combustion engine, radio, and combat aircraft. The second has defined the nature of ground warfare since World War II, and brought about the advent of nuclear weapons, helicopters, and accurate long-range missiles.

Desert Storm unveiled warfare of the future through the rapid maneuver of ground forces with increased lethality over great distances and signaled what is clearly now the third revolution in military thinking and technology. Exploitation of the microchip, space, and other advanced technologies were applied for the first time in combat. The dimensions of this revolution will be defined over the next few years and we must create a structure to use in calibrating these dimensions. We must continue to systematically learn from our ideas about how to apply technology.

U.S. Army Training and Doctrine Command (TRADOC) is using battle dynamics to describe the nature of this change and move our Army into the 21st century. The five dynamics are Early Entry Lethality and Survivability, Battle Space, Depth and Simultaneous Attack, Battle Command, and Combat Service Support. Each provides a method of characterizing an aspect of future warfare and serves as a generator for describing the battlefield and integrating new ideas. The new ideas are aided by advances in technology.

Battle space is one generator; however, it is hooked to the other battle dynamic generators. As will be discussed in this pamphlet, battle space first serves to add an important tool to the commander's kitbag and helps us increase our understanding of the battlefield. Secondly, it will aid in the integration of new ideas into doctrine and tactics. Battle space cannot stand alone. It must be related to the other dynamics. Through our leaders use of battle space, our forces will become more effective and efficient. The lives of our soldiers will be protected. These goals are the subject of this paper.

1 June 1994

Military Operations

MOUNTED BATTLESPACE BATTLE DYNAMIC CONCEPT

Summary. This pamphlet serves as the basis for developing doctrine, training, leader development, organizations, and materiel changes focused on soldiers (DTLOMS) requirements and solutions for operations within mounted battle space and the required capabilities for U.S. Army forces to dominate that battle space.

Applicability. This concept applies to all TRADOC activities which develop DTLOM requirements and products.

Suggested improvements. The proponent of this pamphlet is the Deputy Chief of Staff for Combat Developments. Send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) through channels to Commander, TRADOC, ATTN: ATCD-P, Fort Monroe, Virginia 23651-5000. Suggestions may also be submitted using DA Form 1045 (Army Ideas for Excellence Program (AEIP) Proposal).

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Chapter 1

Introduction

1-1. Purpose. This concept outlines Army capabilities for conduct of operations within mounted battle space in support of the National Military Strategy.

1-2. References.

- a. FM 100-5 (Operations).
- b. TRADOC Reg 11-16 (Developing and Managing Concepts).
- c. TRADOC Vision of Future Battle, 23 Sep 93.
- d. TRADOC Pam 525-5 (Full Dimensional Operations). (To be published.)

1-3. Explanation of abbreviations and terms.

Abbreviations and special terms used in this concept are explained in the glossary.

Chapter 2

Environment for Change

2-1. Why the concept is needed. Battle space must be included in our Army's portfolio of dynamics for two reasons. First, mounted battle space represents a tool which our commanders can use to understand and deal with the complexity of the battlefield. Secondly, battle space provides a structure for refining changes in doctrine, training, organizations, leader development,

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material, and soldiers with ideas on how to use emerging technology. Finally, we must have a dynamic that provides for an ability to help visualize and shape the battlefield within the framework of FM 100-5, Operations. Battle space is this framework.

2-2. Threat. With the collapse of the Soviet Empire, the threat faced by U.S. Army ground forces has changed. The nature of future threats can be characterized by three trends.

a. The most likely threat stems from internal turmoil in parts of the developing world. Civil war, coup d'etat, and internal collapse of entire nations may cause concern to the United States as instability in one country spills over into other countries.

b. Some countries will emerge as major military powers. These countries can pose a threat to U.S. and allied interests abroad. Some of the technology used by the U.S. in the Gulf War, as well as emerging technologies yet to be defined, could be used against the United States.

c. Finally, the U.S. may be placed in a position inverse to Desert Storm, facing a coalition of nations opposed to U.S. interests. This could force the U.S. to fight without allies within the theater, host nation support, support of the world community, or a political consensus to limit the scope of the conflict.

2-3. Force Projection Army. Power projection is a central element of the National Military Strategy of the United States. It describes the ability of the nation to apply all or some of the elements of national power—political, economic, or military—to respond to crisis, contribute to deterrence, and enhance regional stability. The U.S. Army contributes to this strategy through force projection—a demonstrated ability to rapidly alert, mobilize, deploy, conduct operations anywhere in the world, and terminate conflicts on favorable terms.

2-4. Historical perspective. Historically, we have neglected this sort of tactician's vision.¹ Napoleon referred to the 'coup d'oeil' as a glance at terrain that brings into focus all of his knowledge and experience, and sets in motion a series of quick decisions concerning how and where to deploy forces. Germans refer to "Fingerspitzengefuehl"—that fingertip feeling or instinctive sense of matching terrain with doctrine and weaponry.² While helpful, neither of these definitions are robust enough to describe battle space. We must have a dynamic that provides for an ability to help shape the battlefield and a mechanism for generating new ideas that harness and integrate technology. Battle space is this framework.

Chapter 3

Understanding Battle Space

3-1. Contemporary view. "We grow as leaders in the art of command."³ "Commanders (mounted in particular) think through their ears as well as sight and feel.

Intuition fed through experience and training leads to mobility of mind, versatility in mission performance, and makes us unpredictable to our enemies—but always with disciplined aggressiveness."⁴

3-2. Bastogne. On 21 December 1944, Major General Hugh J. Gaffey was commanding the 4th Armored Division in III Corps just north of Arlon, Belgium. With the 101st Airborne Division surrounded some 130 miles to their north at Bastogne, the 4th Armored Division, along with the 80th and 26th Infantry Divisions, were given the mission to rescue the encircled 101st Division. General Gaffey was a veteran and convinced officer whose name was attached to feats of speed and daring in mechanized warfare. His doctrine was simple: "if the ground and the enemy combined to thwart the tanks in the areas originally selected, then [immediately] find some other spot where the enemy might be less well situated to face a mechanized thrust."⁵

A subordinate of General Gaffey's was LTC Creighton Abrams, Commander of the 37th Tank Battalion. It was said by Brigadier General Roberts that, "Abrams, when he got into combat knew everything that was going on. How he knew it, nobody knew, but he did. He knew where every tank was. He knew where every piece of equipment was, and he was able to command and move his outfit and always defeat the enemy in front of him. It was just that simple."⁶

These two leaders, as well as their magnificent soldiers, combined their understanding of battle space to write into the annals of history the bold and daring rescue of the 101st Division.⁷ The history of the 37th Tank Battalion [Task Force] serves as a great example of agility, initiative, depth and synchronization.⁸ In a matter of 72 hours, the 37th Armor had trailed along in reserve, attacked on the axis of one of the leading combat commands, moved to the extreme right flank of the division to ward off a heavy enemy armored formation, withdrawn from that position to the division rear, and swung all the way around to the left flank some 90 miles to attack again toward Bastogne. It was cold, it was wet, it was slippery, and it was Christmas Day. It was also a day for victory.⁹

Abrams and Gaffey understood battle space. They were able to combine the art and science of battle dynamics with a comprehensive understanding of time and space. The result was seasoned leaders who had few friendly casualties, and inflicted their will on the opponent.

Chapter 4

Battle Space Concept

4-1. Overview.

a. Battle space includes the breadth, depth, and height in which the commander positions and moves assets over time. Battle space is based on the notion that commanders expand their thinking to develop a vision for dominating the enemy and protecting the force.

b. Battle space provides a framework for commanders to view potential missions, freeing their thoughts from physical restrictions and allowing them to consider METT-T uninhibited by externally imposed graphics. Battle space offers a holistic look at fighting—a visualization by commanders at every level of the campaign and operation. Mounted battle space relies on the other battlefield dynamics with all pieces combining to make a whole.

c. Operations within mounted battle space include both the deployment and employment of forces. Echeloned forces are deployed within the early entry dynamic and employed within the battle space dynamic. Forces operating in mounted battle space include armored and aviation forces. These forces are organized into combined arms task forces with combat, combat support and combat service support capabilities tailored for specific combat or operations other than war.

4-2. The construct.

a. Construct means to form in the mind by putting into orderly arrangement parts, facts, and impressions. Battle space is a construct, a way to think about fighting—a visualization by commanders at every level of the entire battlefield and all phases of the campaign and operation. While a new and important label, battle space is an old construct. Historically, the seasoned and successful leader reports a new level of awareness after a few months of battle—a pre-battle ability to visualize the battlefield—before, during, and after battle. The leader reports an ability to see success and, more importantly, recognize critical points where he can fail. His intent is clear, concise, and focused. He understands where, when, and why he wants to meet and defeat the enemy. He also does not have to use his radio very often. The leader must arrive on the battlefield with a seasoned understanding of battlefield dynamics. Training commanders in understanding the battle space construct is becoming much more important.

b. "Battle space is both an art (honed by intellect, curiosity and, most of all, by experience) and a science (in that much can be taught and learned)."¹⁰ Proper use of this construct prevents our combat, combat support, and service support units from becoming surprised or paralyzed by unexpected enemy actions. From the introduction of our forces, we dominate the battlefield by dominating maneuver.¹¹

c. The construct demands the leader understand the time and space limits, not necessarily constrained by terrain, where his force can detect, acquire, and engage the enemy. It also involves the leader mentally combining his experiences, the effect of friendly and enemy information, and weapon systems with time and space parameters. The result is an ability by the leader to visualize, in three dimensions, the cause and effect of action and counteraction by both his and his opponents' forces. Use of the construct produces actions necessary to be taken by the leader designed to dominate maneuver.¹²

4-3. The components.

a. Application of battle space involves the leader and battle command in a complex equation involving terrain, the enemy, mobility and agility, force protection, and weapons. We need to understand the role and potential effect of technology on each component.

b. Battle command.

(1) As the glue that bonds the battle space construct, battle command involves the creation of reliable and redundant command, control, and communication. The leader fights with all systems and units horizontally integrated. His task is to use battle command supported by battle space to optimize each unit's contribution to the fight. Battle command and battle space are identical twins, a lot alike, yet distinctly different. The leader must be able to maneuver forces, rapidly apply overwhelming firepower, and see the enemy throughout the depths of the battlefield. His lean but functional battle command system must provide intelligence and a prism for the leader to use in shaping his vision.

(2) Emerging technologies will allow a leaner command (and staff) apparatus enabling us to keep the enemy off balance by planning and acting more quickly than the enemy. New communication technologies will reduce time required and available for our troop-leading procedures and execution of orders. We can disseminate critical information, issue fragmentation orders, and exploit opportunities far more rapidly than can our potential enemies. Reliable, secure, long-range communications and position locating devices will permit us to disperse our forces and reduce our vulnerabilities while enabling us to rapidly mass effects to seize any advantage our intelligence capabilities uncover.

(3) The commander's ability to see the entire depth of the battlefield is changing in a fundamental way. The spectrum of intelligence gathering tools, from global to tactical assets, will provide a clearer picture of the battlefield than ever before. Knowledge of the enemy's positions, intentions, and capabilities will give us significant advantages on the battlefield. The challenge is to develop technology and procedures which ensure that the ground commander will be provided with analyzed and timely intelligence. The commander must then have the ability to rapidly collapse and shape this information into a format which fighters need to visualize the entire battle space necessary to destroy or neutralize the enemy.

(4) The commander will need to develop an advanced awareness of the need for timing, mass, and security. Given this "post-graduate" level of understanding of battlefield dynamics, he will be able to control his battlefield through a well-timed application of mass, a consideration of the time required to exploit mass, and an awareness of the exact conditions of security. The battlefield commander will blend time, mass, and security to control both the vertical and

horizontal dimensions of the battlefield. He must be able to visualize the relationship between these dynamics, and he must strive for simplicity of plans.

c. Terrain and weather.

(1) Skilled commanders understand how contours of the land and the disposition of forces lend themselves to decisive battle. They use terrain, including natural and man-made obstacles, to the best possible advantage. Obstacles are integrated into the maneuver plan and synchronized with the terrain and weather to support decisive operations at the best time and place. Weather is used to leverage advantage in the favor of friendly forces. Our ability to operate in limited visibility conditions or over weather affected terrain often advantages our forces.

(2) While technology will have little effect on actual terrain, we can anticipate new terrain-enhancing tools to provide a more rapid understanding of line of sight relationships, trafficability, and terrain-shaping maneuvers. As we bring digitization to our equipment, we will be able to find new applications for these terrain enhancing tools. Weather has always played a major role in determining the outcome of battle. In the future, the effect of weather will offer us more advantage. As we continue to condition and equip our forces to operate in marginal weather, we will extend our leverage.

d. Mobility and agility.

(1) "As the key to dominating maneuver, mobility is first a state of mind possessed by good commanders."¹³ Closely related to terrain is a leader's understanding of his requirement for mobility and agility and the need to use them to gain advantage over his enemy. If you believe the enemy has an advantage, commanders must find a way to neutralize it. This dynamic relationship is the hinge on which the door of victory swings. Mobility and agility are the tools of innovation used by the commander to provide momentum to control his opponent.

(2) In the future, gaining early, critical information on the enemy will define more precisely the Commander's battle space. A by-product of this process will be the ability to maintain a significant range advantage over the enemy. Extending the range in which task forces commence combat actions will achieve three distinct advantages.

(a) Enhance our agility by destroying enemy forces before they can effectively engage throughout the depth of the battlefield.

(b) Reduce the vulnerability of our forces by using unmanned sensors to increase acquisition ranges, destroy his forces, and cause premature deployment (while increasing the dispersion of the friendly force) will enhance agility and mobility.

(c) Increase our ability to maneuver by improving our control, communications, and base of fire. As a direct result of this improvement we will increase our mobility and agility.

e. Force protection.

(1) Force protection currently involves some special technologies, but more importantly formations, maneuvers, and procedures designed to keep the force safe. These tactical measures remain necessary for the leader. Commanders continue to need redundancy and depth in planning for force protection. "The bulwark of such protection will remain formations; however, given the value our nation places on protecting its soldiers, we must enhance protection."¹⁴

(2) We are entering a new era in force protection. Special armor, reactive armor, composite material, and protection packages will allow us to field lighter, more capable vehicles. Active and passive protection such as decoys, electronic countermeasures, stealth technology, and vehicle-integrated defense systems will raise vehicle survivability to new levels. Networking combat systems with digital communications technology will allow the integration of each element of the combined arms team as it has never before been integrated. The resulting synergism will markedly increase collective protection. Efforts to counter smart and brilliant munitions will cause us to adjust how we use our weapons as well as the physical measures we take to provide higher levels of protection.

f. Weapons.

(1) Our arsenal of weapons remains the core of our ability to control the battlefield. They provide the hammer we use to shape the battlefield metal. While over the past 15 years we have witnessed an exponential increase in both the effect and strength of our arsenal, recently, we have experienced an ability to increase the distance between systems and yet maintain the effect of mass. This enables us to control more terrain with less force.

(2) By increasing ranges at which we detect, acquire, identify, engage, and destroy or neutralize our adversary in the close fight, we will continue to own several distinct advantages over the enemy so we can increasingly mass effects and not forces. First, we begin the destruction of his force with direct and indirect fires before he can effectively engage us with his direct fire systems, and often before he can detect us. This allows us to increase our lethality and seize and maintain the initiative. Second, we can reduce the vulnerability of our forces by using the increased ranges of our systems in the direct fire fight, allowing us to cover broader frontages with fewer forces. Third, we enhance our ability to maneuver by improving our base of fire and enhance the flexibility of our force. These advantages contribute to maintaining the initiative, disrupting the enemy commanders ability to move, and imposing our will upon the enemy.

Chapter 5

Battle Space, Ideas, and Harnessing Technology

5-1. Technology. In order to understand and employ a particular technology, the commander must first

understand its limits. Only then can its capability be fully utilized. Soldiers and leaders must have a clear understanding of how emerging technologies affect battle space. Understanding the limitations and capabilities of each system means the difference between having a plan and having a plan that will work. Technological advances, regardless of how astonishing, are only tools and must be integrated into the tool box. Technological advances in the areas of intelligence, battle command, weapons capabilities, and force protection will result in accelerated battle tempo and expanded operational space for tactical commanders. Continued development in these areas offer great potential for expanding and heightening the commander's sense of battle space.

5-2. Required capabilities. As the result of the impact of technology on the components of battle space, the battle space construct will become more important. The ability to successfully use mounted battle space to our advantage depends on our ability to leverage technology to improve operational capabilities with lean command apparatus in five categories:

a. Increased lethality. Amplify situational awareness and target handoff of combined arms task force (particularly among maneuver, fire support, and aviation elements) to reduce fratricide and maximize combat power.

b. Increase target acquisition. Increase capability to acquire and kill—all weather, day/night with increased probability of kill (PK).

c. Increased survivability. Optimize survivability of mounted force with: countermeasures like reduced signature technology, use of new materials, safety enhancements, and leadership training.

d. Digitize the battlefield. With the Battle Command Lab, we must expand horizontal integration of digitized information. Digitizing the battlefield will provide commanders the ability to gain critical information, analyze, synchronize, integrate, and employ all of his warfighting systems to maximize effects on the future battlefield. In order to focus this effort, we will need further organizational changes to reduce the barriers between the combat development and battle lab communities. We must also continue to fund research into new techniques for battle command. In using technology to help control the battlefield, the most important consideration will be to create digitization software and hardware which is flexible enough to respond rapidly to changes in warfighting tactics, techniques, and procedures.

e. Improve force structure. Determining optimal force design for the future ground forces is critical. Clearly, in the future (and assuming fielding of selected new capabilities), we can perform today's missions with an overwhelming advantage. With smaller and more capable units, we can also create more favorable leader to led ratios. These initiatives will give us the opportunity to redesign all organizations from platoon

through corps. Included in this redesign must be a strong emphasis on building reconnaissance and security organizations to meet the demands of commanders at every echelon.

5-3. Implications. Battle space, in conjunction with the other battle dynamics, has a dramatic effect on the core dimensions of our Army. Perhaps the overarching effect will be the unfreezing of thinking about how to deal with the 21st century battlefield. Historically, we have viewed the battlefield through the lens of one particular combat system or in a combat orders situation—mission format. We must now look through a fish-eye lens that gives us a panorama. We must examine each aspect of getting to the battle, fighting the battle, and returning to a ready condition.

a. Doctrine.

(1) Use of battle space will demand that we accept more flexibility in our development and teaching of doctrine. As we discover more principles for employing or teaching the concept of battle space, we must have access to modifying the underlying doctrine, tactics, techniques, and procedures. Traditionally, we have been reluctant to change our doctrine; this may not be helpful in the post battle space era. Also, we must develop new mechanisms for rapidly developing doctrine for each echelon of our force structure. The current standard measured in years must be reduced to months, if not weeks. We must have a new-found and comfortable ability to absorb change. This will demand a bold reshaping of our procedures and the way we condition our tactical leaders to exercise a full range of options to dominate battle space. To do so we must institutionalize research into finding new methods to teach the principles for using battle space.

(2) Our current approach to using data and observations from our Combat Training Centers only realizes a fraction of their potential utility. We must develop more effective methods of harvesting this information and re-investing the dividends into the training base. With an enriched process loop, we can accelerate our understanding and training of the battle space construct.

b. Training.

(1) It will not be adequate to just have leaders who understand battle space. We know that the battlefield produces strange and incalculable changes in leadership. Our soldiers must be conditioned to understand the basic battle space construct and its relationship to battle command. Also, as the brightest in our Army's history, soldiers are a wealthy source of new ideas concerning how to harness and integrate technology. Our Combat Training Centers must adopt a more flexible menu of opposing forces that portray a range of enemy capabilities. Our Observer-Controller community needs to help shape our understanding of battle space before we begin to introduce the concept. While we cannot lose our focus on training soldier basic skills, we must focus on a training management and

development system that is capable of modifying tasks to accommodate changes in battle dynamics. Our present system is too cumbersome and slow.

(2) As we move from an OPTEMPO-based training strategy toward a simulation foundation, we must tool our spectrum of simulation devices to accommodate the battle space construct. With the millions of dollars about to be committed to the Close Combat Tactical Training System, we must focus development efforts to include replication of battle space and battle command. Simulation seems to be an ideal medium to use in developing the experiential aspect of battle space to allow units to train on continuous and combined arms operations.

(3) As the active component force structure declines our country has a greater reliance on the future capabilities of the reserve components. Reserve component units must now be closely integrated into a holistic view of readiness training. They must exercise to the same standard of pre- and post-mobilization training. This will ensure that these units can be rapidly committed to battle.

c. Leader development. In order to overcome conventional force ratios, a mathematical necessity with the advent of a smaller United States ground force, we must turn to a renewed dependence on leaders who have internalized the battle space construct. We must condition leaders to appreciate and apply the battle space construct. While there are immediate steps we can take to indoctrinate our leaders with this ability, the subject demands study. We need to investigate the application of history to the developmental process. Electronic tools like virtual simulation must be built to aid in the process of learning battle space principles. The critical task will be to define those experiential and educational criterion that represent the core of a leader's ability to visualize in three dimensions plus integrate time and space. We must discover techniques to give the leader some synthetic experience in the battle space construct. We need to use the civilian academic community to help; however, this is a uniquely military challenge. Leaders must acquire the ability to visualize battle space and effectively communicate their vision. Emphasis should be placed on developing a leader's ability to "feel" and manage the increased complexities of a modern battlefield. Ways to improve the ability to visualize and communicate battle space are gained through effective training, practical experience, mentorship, leadership experience, and the development of effective communication skills.

d. Organization. Battle space will play a significant role in developing organizations to support changes in doctrine. Early Entry, Depth and Simultaneous Attack, Logistics and Battle Command will control the shape of our organizations. Battle space and battle command will take those organizations onto the battlefield. However, as we restructure our organizations, we must provide for simplicity and uniformity of organizations. These principles will simplify the commander's battle space

equation. Training and employing single purpose and specialized organizations provides the commander a capability to take a surgeon's approach to the battlefield. Single purpose organizations provide for higher resolution training, facilitate development of advanced training techniques, and produce a simpler logistics challenge. We will continue to need the combined arms team; however within this team we need to create specialization.

(1) Organizations must be designed to be deployable, tailorable and agile to provide the commander the assets to dominate battle space while performing diverse missions throughout the full range of military operations.

(2) Armored and cavalry forces are essential to the success of the combined arms force. The arrival of armor and cavalry units on the battlefield still defines the decisive phase of ground combat. We must ensure that we retain enough of these forces to ensure rapid victory with minimal casualties.

e. Materiel. We need a built-in battle planning and rehearsal system for the task force commander to support using battle space. Using weapon system level resolution, the commander must have a capability to play-out maneuver options. The current alcohol-pen based approach is slow and produces unnecessary fatigue in our staff. With an automated and dual purpose system, the commander can either develop the most effective forced entry, maneuver, deep attack, and synchronization option, or rehearse the selected option. When connected to the battle command network, this capability may warn us of potential dangers in the synchronization effort. While the JANUS technology is a beginning, we must integrate advanced versions of this capability into our battle command systems.

(1) Lean, mobile command posts capable of operating on the move will enable the commander to see the entire battlefield and pick the optimum place from which to command. Enhanced communications systems and digital networking must be developed to maximize the use of near real-time information to support command decisions, operations orders process, and our ability to fight in all weather, day and night, continuous battlefield conditions.

(2) Future combat, combat support and combat service support must be survivable, but they must also be lighter in weight in order to facilitate their deployability. Equipment must be designed to reduce fuel and maintenance requirements and operate more efficiently. This, coupled with future logistical advancements made possible through computer technology, improved materials and satellite communications, will assist in decreasing logistical support requirements.

f. Soldiers. Our battlefield capability is unlimited because of the potential of our soldiers. When they understand what is supposed to happen and why their leaders want a particular outcome, they are

unstoppable. We must develop techniques and technologies that will permit sharing of battlefield information. The information must be in a graphical form and able to be shared by every member of the combined arms team. If we keep in mind the lone ACE operator towing the MICLIC to the breach sight under near zero illumination conditions as the key to conducting a deliberate breach, we can understand why everyone needs unobstructed access to current information. This is the only way to achieve the synergy of battle space.

Chapter 6

Battle Space—Principles and Leaders

6-1. Abilities. The core use for the battle space construct will be to instill the ability in leaders to understand how to use the battlefield. There are a group of skills that will create this capability.

- a. Describe DST process.
- b. Know basic ranges and effects of both friendly and enemy direct and indirect fire weapons.
- c. Identify movement rates of mechanized forces over various types of terrain.
- d. Make sketches to scale of the battlefield.
- e. Describe friendly and enemy tactics at every echelon.
- f. Describe effect of obstacles, terrain and weather.
- g. Describe the end state in terms of friendly and enemy forces (at operational level, probably not at tactical level).
- h. Describe the friendly and enemy action and reaction cycle in terms of time and space.
- i. Describe failure modes for the friendly and enemy force.
- j. Describe indications of success he expects to see on the battlefield.
- k. Describe the capabilities of air force and naval systems to support his forces.
- l. Know where to be on the battlefield to influence the fight.

Each of these skills must be learned to the level where the leader can recite and apply the skill. Unaided by his staff or checklists, the leader must be comfortable in his understanding of mechanized warfare. In an environment that demands an officer be joint qualified, this will be a challenge. We will need to find efficient methods to develop the ability to understand battle space. Our Combat Training Centers will play the key role in developing a leader's ability to use this construct.

6-2. Conclusion. The need to accomplish a greater diversity of battlefield tasks, and cover more space with

less force has driven us to consider battle space as a central concept of our doctrine. We must now formalize the construct and teach this important idea in our leader development programs. The battlefield leader develops this construct of battle space through the application of a superior understanding of battlefield dynamics to synthetic and changing conditions driven by simulation. Battle space is based on the commander's ability to visualize the battlefield. While the information age has facilitated and highlighted the need for training leaders to appreciate battle space, like the German Army in the early days of World War II, it is the Army whose commanders best understand the concept that is more likely to be successful.

Footnotes

- ¹ Nye, *The Challenge of Command*, p. 59.
- ² Nye, *The Challenge of Command*, p. 72.
- ³ In remarks to an AUSA Symposium, February 1993, General Franks discussed how leaders are developed.
- ⁴ Major General Funk made this quote during discussions in February 1993 concerning the concept of battle space.
- ⁵ Bulmenson, *The Patton Papers*, p. 603.
- ⁶ Sorley, *Thunderbolt*, p. 603.
- ⁷ They also returned and applied the experience toward reshaping the Army. Indeed in Desert Storm, we fought with a directdescendent division structure from this post World War II thinking.
- ⁸ Combat Command B was composed of the 37th Armor, 52d Armored Infantry, and 94th Armored Field Artillery.
- ⁹ Sorley, *Thunderbolt*, pp. 74-75.
- ¹⁰ Major General Funk made this comment in response to questions concerning battle space in March 1993 at the U.S. Army Armor Center.
- ¹¹ There is a clear and interactive relationship between battle space and battle command. The battle space construct is the frame that we hang the battle command fabric onto.
- ¹² This construct might be viewed as an extension of the Decision Support Template; however, the commander has internalized the parameters that go into developing the DST and is able to personally and continually update the DST.
- ¹³ Major General Funk made this quote during a Pre-Command Course, March 1993, at the U.S. Army Armor School.
- ¹⁴ General(Ret) Cavazo made this comment in response to a question concerning force projection during an interview in March 1993 at his home in Leander, Texas.

Glossary

Section I

Abbreviations

ACE	Armored Combat Earth Mover
DST	Decision Support Template
DTLOMS	doctrine, training, leader development, organization, materiel, and soldiers
MICLIC	Mine Clearing Line Charge
METT-T	mission, enemy, troops, terrain, and time available
NMS	National Military Strategy
OOTW	Operations Other Than War
TRADOC	U.S. Army Training and Doctrine Command

Section II

Terms

Battle command

The art of battle decision making, leading, and motivating soldiers and their organizations into action to accomplish missions. Includes visualizing current state and future state, then formulating concepts of operations to get from one to the other at least cost. Also includes assigning missions; prioritizing and allocating resources; selecting the critical time and place to act; and knowing how and when to make adjustments during the fight.

Battle dynamic

Future American military operations will be characterized by change in five major interrelated areas known as battle dynamics: battle command, battle space, depth and simultaneous attack, early entry, and combat service support.

Battlefield framework

An area of geographical and operational responsibility established by the commander; it provides a way to visualize how he will employ his forces; it helps him relate his forces to one another and to the enemy in time, space, and purpose.

Battle space

Components determined by the maximum capabilities of a unit to acquire and dominate the enemy; includes area beyond the AO; it varies over time according to how the commander positions his assets.

Construct

To form in the mind by putting into orderly arrangement parts, facts, and impressions.

Force projection

The movement of military forces from CONUS or a theater in response to requirements for war or operations other than war. Force-projection operations extend from mobilization and deployment of forces, to redeployment to CONUS or home theater, to subsequent demobilization.

Operation other than war

Military activities during peacetime and conflict that do not necessarily involve armed clashes between two organized forces.

Power projection

The ability of the nation to apply all or some of the instruments of national power—diplomatic, economic, informational, or military—to respond to crisis, to contribute to deterrence, and to enhance regional stability.

Tempo

The rate of military action; controlling or altering the rate is a necessary means to initiative; all military operations alternate between action and pauses as opposing forces battle one another and fight friction to mount and execute operations at the time and place of their choosing.

Tenets

A basic truth held by an organization; the fundamental tenets of Army operations doctrine describe the characteristics of successful operations.

Versatility

The ability of units to meet diverse challenges, shift focus, tailor forces, and move from one role or mission to another rapidly and efficiently.

Synchronization

The ability to focus resources and activities in time and space to produce maximum relative combat power at the decisive point.

FOR THE COMMANDER:

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